

a What is claimed is

Claims

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1. A milling roller comprising a roller base body (19) driven by a milling roller drive device (11 to 15) via a transmission unit (32), and a one-piece milling tube (25) to be coaxially mounted from one side on the roller base body (19) and to be attached in a manner allowing exchange thereof, the milling tube (25) carrying cutting tools on its outer surface (46), characterized in that the milling tube (25) comprises fastening elements (28), radially projecting from the inner surface (44) of the milling tube (25), by which the milling tube (25) can be mounted in a rotationally fixed manner to the roller base body (19) or to a member connected to the roller base body (19).
 2. The milling roller according to claim 1, characterized in that the fastening elements (28) are arranged on at least one end side of the milling tube (25).
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 3. The milling roller according to any one of claims 1 or 2, characterized in that the milling tube (25) is fastened to an end side of the roller base body (19) and is radially supported on the other end side.
 4. The milling roller according to any one of claims 1 to 3, characterized in that the fastening elements (28) comprise flange members projecting radially inward from the milling tube (25).
 5. The milling roller according to any one of claims 1 to 4, characterized in that the milling tube (25) is arranged at a radial distance from the roller base body.

6. The milling roller according to any one of claims 1 to 5, characterized in that the milling tube (25) axially projects relative to the roller base body (19).
7. The milling roller according to any one of claims 1 to 6, characterized in that the member connected to the roller base body (19) comprises the transmission unit (32) integrated into the roller base body (19).
8. The milling roller according to any one of claims 1 to 7, characterized in that the milling tube (25) is radially supported at two axially spaced positions on the roller base body (19).
9. The milling roller according to claim 8, characterized in that the support comprises radial guide elements (26;33;42) fastened either radially outside on the roller base body (19) or radially inside on the milling tube (25) or are arranged between the roller base body (19) and the milling tube (25).
10. The milling roller according to claim 8, characterized in that the support comprises radial guide elements (42), wherein the guide elements (42) are integrally connected to the at least one fastening element (28).
11. The milling roller according to claim 9, characterized in that the support comprises radial guide elements (26), wherein the guide elements (26) are arranged on the free end side of the roller base body (19).
12. The milling roller according to any one of claims 9 or 11, characterized in that the radial guide elements can comprise radially acting tensioning elements (60,62,64).

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13. The milling roller according to any one of claims 1 to 12, characterized in that, between the milling tube (25) and the roller base body (19), at least one support ring (33) is arranged as a radial guiding element.
14. The milling roller according to claim 15, characterized in that the at least one support ring (33) comprises at least two radially tensioned segment rings (60,62,64).
15. The milling roller according to claim 13 or 14, characterized in that the at least one support ring (33) is arranged for axial displacement relative to the roller base body (19) and the milling tube (25).
16. The milling roller according to claim 14 or 15, characterized in that the segment rings (62,62,64) are wedge-shaped in cross section.
17. The milling roller according to any one of claims 13 to 16, characterized in that the at least one support ring (33) comprises a central ring (60) having a trapezoidal shape in cross section and arranged to be axially tensioned against a radially outer ring (62) and a radially inner ring (64) which have an opposite trapezoidal shape in cross section, and pressing the outer ring (62) against the milling tube (25) and the inner ring (64) against the roller base body (19).
18. The milling roller according to any one of claims 13 to 17, characterized in that the at least one support ring (33) is divided into two or more parts in the circumferential direction.
19. The milling roller according to any one of claims 1 to 28, characterized in that the transmission unit (32) is arranged at the end of the roller base body (19) facing toward the milling roller drive device (11 to 15).

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20. The milling roller according to any one of claims 1 to 18, characterized in that the transmission unit (32) is arranged at the end of the roller base body (19) facing away from the milling roller drive device (11 to 15), the transmission unit (32) being connected to the milling roller drive device (11 to 15) by a shaft (56) guided through the roller base body (19).
21. The milling roller according to any one of claims 1 to 20, characterized in that the roller base body (19) is supported in two side walls (16,17) of a roller box (31), that the side wall (17) facing away from the milling roller drive device (11 to 15) can be displaced by a pivoting or axis-parallel movement, and that the pivotable side wall (17) in the closed condition receives the movable bearing (24) of the roller base body (19).
22. The milling roller according to claim 21, characterized in that the movable bearing (24) comprises an outwardly tapering guide member (40) and that the side wall (17) comprises a correspondingly tapering recess (41) receiving the guide member (40).
23. The milling roller according to any one of claims 1 to 22, characterized in that the roller base body (19) is supported in two side walls (16,17) of a roller box (31), that a machine cover (21) arranged on the milling roller drive device (11 to 15) is provided with openings (23) allowing access to fastening elements (20) between the side wall (16) facing toward the milling roller drive device (11 to 15) and the transmission unit (32) without a demounting of machine parts.
24. The milling roller according to any one of claims 1 to 23, characterized in that the free end of the milling tube (25) is provided with a protective sleeve (39) for the inner surface (44).
25. The milling roller according to claim 13 and 24, characterized in that the protective sleeve (39) projects from the support ring (33).

26. The milling roller according to any one of claims 1 to 25, characterized in that the roller base body (19) is surrounded by a protective tube (38).
27. The milling roller according to claim 13 and 26, characterized in that the protective tube (38) comprises recesses (37) arranged in a uniform distribution at predetermined axial distances on the circumference, for receiving the support ring (33).
28. A construction machine, preferably comprising a machine frame (2) having a milling roller (18) according to any one of claims 1 to 27 arranged or supported therein.

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